

REMARKS/ARGUMENTS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office Action, and the following remarks are presented for the Examiner's consideration.

Claims 94-111 and 114-157 were rejected under 35 USC 103(a) as being unpatentable over Sherman (US 2,320,754) in view of Bettinzoli (US 2006/0121402). Traversal of this rejection is made for at least the following reasons. Neither Sherman nor Bettinzoli disclose, teach, or suggest at least three distribution chambers, each distribution chamber having three distribution channels, each distribution channel having a plurality of flame ports, and at least one injector per distribution chamber.

Regarding Sherman, it discloses a 4-leaf clover configuration with a single asymmetric gas feed supplying four burner prongs. Sherman does not disclose chambers having three distribution channels in a "T" configuration with flame ports along each channel. Sherman discloses flame ports only along the side of the inwardly directed burner prongs and at the ends of the projections. Sherman has no flame ports along the inner circumferential portion of the distributor.

Sherman does not disclose "T" shaped chambers having three channels with flame ports. Instead Sherman discloses only "burner prongs" extending away from the annular passageway and having passageways which lead to the gas ports. (col. 1, l. 57). There are no flame ports along the annular passageway in contrast with the claimed arrangement in which flame ports are provided along each of the limbs of the "T" shaped channels of the chamber.

Sherman does not disclose one injector per chamber. Sherman has a single asymmetric feed point for all the internally directed burner prongs.

Regarding Bettinzoli, it has a 4-leaf clover configuration (4 chambers) with only 2 gas feeds. [0035]-[0040]. Claim 94 requires that a chamber has three channels with flame ports. Bettinzoli does not disclose a Venturi system with each 'chamber' of the present claims.

In the present Office action, the Examiner states that Sherman discloses:

"at least three distribution chambers ... each distribution chamber having at least three distribution channels having a 'T' configuration."

However, when discussing Bettinzoli, the Examiner states:

“... there is an injector for each chamber as claimed.”

The chambers to which the Examiner refers in relation to Bettinzoli are not the same as in the present claims. The claims define the chamber as having three channels forming a substantially “T” configuration, the channels having flame ports and each chamber having a corresponding injector. Bettinzoli discloses four T-shaped chambers and only two injectors. In other words, in Bettinzoli, the distributor has a four leaf clover configuration. There are four inwardly projecting distribution channels and only two injectors. Hence, Bettinzoli does not disclose one injector per chamber.

The Examiner asserts that it would have been obvious to have one injector per chamber:

“... In view of Bettinzoli, there is an injector for each chamber as claimed. It would have been obvious to have a Venturi system for each chamber, because the technique was known in the art, yielding the predictable result of distributing an effective amount of an air/gas mixture to reach a desired flame temperature.”

However, this statement is now moot because the specification of Bettinzoli does not disclose the claimed arrangement. As is clearly seen in Fig. 1a of Bettinzoli, the distribution of flame ports in the chambers with corresponding injectors is of a higher density than in the chambers without injectors. The flame ports of Bettinzoli are not uniformly distributed on the inward projections. Those on the projections adjacent to the injectors have flame ports along each side of the projection, but none at the end, while the projections remote from the injectors have fewer flame ports along the sides of the projections of the remote chambers, and this is staggered in relation to the flame ports of the projections adjacent the injectors.

Thus, neither Sherman nor Bettinzoli discloses an arrangement which has a 1:1 ratio of injectors to chambers.

For at least the above-mentioned reasons, the combination of Sherman and Bettinzoli fails to render obvious claim 94 and the claims depending therefrom. Accordingly, withdrawal of this rejection is requested.

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Amdt. dated April 20, 2010
Reply to Office Action of January 20, 2010

Claims 112, 113, and 158-164 were rejected under 35 USC 103(a) as being unpatentable over Sherman ('754) in view of Bettinzoli ('402) and further in view of Haynes et al. (US 6,439,882). Traversal of this rejection is requested for at least the following reasons.

Claims 112 and 113 depend from claim 94, which is believed to be allowable over the combination of Sherman and Bettinzoli for the reasons discussed above. Haynes does not make up for these aforementioned deficiencies of Sherman and Bettinzoli. Thus, it is believed that claims 112 and 113 are allowable over the combination of Sherman, Bettinzoli, and Haynes.

Regarding claims 158-164, each of these claims require that each chamber includes one venture. The Examiner relies on Bettinzoli to disclose this feature. However, as disclosed in detail above, Bettinzoli does not disclose the injector/chamber ratio of 1:1. For these reasons, the combination of Sherman, Bettinzoli, and Haynes fails to render claims 158-164 obvious. Withdrawal of this rejection is requested. In consideration of the foregoing analysis, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application. If there are any fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. ABE-40943.

Respectfully submitted,
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